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TORREYA

November, 1908

Vol. 8.

No. 11.

THREE RARE MYXOMYCETES

BY HENRY C. BEARDSLEE

Three of our rarest and most interesting species of slime moulds are doubtless *Cribraria violacea* Rex and *C. minutissima* Schw. and *Clastoderma DeBaryanum* Blytt. It has been my good fortune to observe all three of these in some abundance and the following notes are given in the hope that they may be of interest.

My first acquaintance with *Cribraria violacea* was made while working at the Illinois Biological Station at Havana, Illinois. A very few scattering plants were first found on some bits of wood which had been brought into the laboratory on account of an entirely different species which was growing upon them. The specimens were unmistakable and proved the forerunners of more abundant collections. Once it became apparent that this dainty species was to be found, close examination revealed it, never in large quantities, but so generally distributed in my collecting grounds that it became apparent that its "rarity" there was due merely to its minuteness; for it can scarcely be detected, as it ordinarily occurs, without the use of a lens. A few weeks later it was found under very different circumstances. My attention was called to an old log which was declared to have a violet metallic sheen. Upon examination the log proved to have a beautiful iridescence, which was visible in a bright light at a distance of several feet, due to the presence of an enormous colony of this rare plant, which had completely covered the surface of the log in such abundance as to impart its peculiar color to it. Doubtless this one log had upon its surface more of this species than has been observed elsewhere in the world. It was certainly an [No. 10, Vol. 8, of TORREYA, comprising pages 233-252, was issued October 22, 1908.]

inspiring sight for a mycologist. Rex stated that the plasmodium of this species is deep violet-black, but unfortunately no trace of plasmodium could be seen on or in the log to verify this. About five stations for this species are reported.

During the same summer *Clastoderma DeBaryanum* was found at the same place. This species is also difficult of detection, though in a different way. The sporangium is globose, less than a fifth of a millimeter in diameter, mounted upon a stalk as fine as gossamer. When dry it is difficult of detection, and even when seen may readily be passed by under the impression that it is a mould.

A few scattering specimens were first found, but later a log was found and kept under observation which seemed to be completely filled with its plasmodium. This appeared at frequent intervals, covering the log with a pale yellow network of plasmodial threads, changing over night to a thick growth of the delicate sporangia. So far as I know this is the only time that its plasmodium has been observed with certainty. Later this species was found in Ohio and in North Carolina.

During the past summer the third species noted, *Cribraria minutissima*, was found in North Carolina, near Asheville. This seems the daintiest and most elusive of the Cribrarias. It is so minute that even after it has been found and mounted in the herbarium it is difficult to detect the delicate sporangia on the bit of wood which has been mounted. It seems to be fairly common at Asheville, but it is our most difficult species to locate.

Two facts doubtless account for the few recorded stations of these three plants. Their small size manifestly is one of these reasons. Upon an old log in dense woods each of them will defy any but the very closest scrutiny. In addition, it must be kept in mind that it is only when the sporangia have been formed that they are visible at all, and while the plasmodium may be present in large quantity, the period in which the sporangia are formed may be so short that it is easily missed.

At Havana, for instance, the beach along the Illinois River was thickly covered with old decorticated logs. These were examined regularly through the summer, three times a week.

Occasionally a few species of Myxomycetes were found in varying abundance, but usually they furnished a barren collecting ground. On one morning these logs everywhere along the river were found to be thickly covered with *Comatricha laxa* Rost. and *Enerthenema elegans* Bowm.

An endless amount of both species could have been gathered. Other occasions were apparently just as favorable, but at no other time did either species appear during that summer or the next.

It is easy to understand from an occurrence like this that a species may be present in large quantities in the plasmodial state and still fail to be observed even by a careful collector. Such a plant as *Cribraria violacea*, which has been detected at half a dozen stations stretching from Germany to Illinois, is in all probability general in its occurrence, but for the reasons given has failed as yet to be widely detected.

ASHEVILLE SCHOOL,
ASHEVILLE, N. C.

A TRAGEDY OF THE FOREST *

In the forests of tropical regions, where vegetable growth is rank and the resulting strife for supremacy very keen, many plants are forced to find a home upon the trunks and branches of trees. Among these are the greater part of the orchids and bromeliads, and many of the aroids, ferns, and hepatics of these regions, which thus often clothe the trunks and branches with a living mantle. Such, however, are harmless, for they work no injury to the trees which furnish them a home. But there are others which are not of this harmless nature. These have their beginnings as weak epiphytes, and from guests rapidly develop into masters, finally destroying the tree which gave them friendly shelter when young.

If you ever visit a tropical forest, seek for some of these. It will not take a long hunt to find one. Look in the crotch of some tree or on the stump left by some broken limb, or wherever a bit of humus has collected to furnish a foothold for the seed, and you may see a small plant, perhaps but a few inches or a foot

* Illustrated with the aid of the McManes fund.